

CLAIMS

What is claimed is:

1. A system for providing high speed wireless data exchange, comprising:
a cellular network comprising a plurality of base stations for communicating with a wireless transmit/receive unit (WTRU);
a device locator for determining the location of the WTRU; and
at least one data pump, which supports high speed connection for wirelessly transferring information between said WTRU and said cellular network; and
whereby said connection is automatically established when said WTRU is within a certain range of said data pump.
2. The system of claim 1, wherein the device locator includes a GPS receiver operatively associated with the WTRU.
3. The system of claim 1, wherein the device locator receives triangulation data from the base stations, and resolves the triangulation data to determine a location of the WTRU.
4. The system of claim 1, further comprising:
a database maintained by the system for comparing the determined location of the WTRU and locations of data pumps; and
the wireless network providing the WTRU with data indicating the availability of a data pump when the determined location of the WTRU is close to a location of a data pump.
5. The system of claim 1 further comprising a data cache for storing data transferred between the network and the data pump, thereby permitting data transfer at rates exceeding a data transfer rate of a data connection between the data pump and remaining portions of the cellular network.

6. The system of claim 1 further comprising a data cache for storing data transferred to the data pump, thereby permitting data transfer at rates exceeding a data transfer rate of a data connection between the data pump and remaining portions of the cellular network.

7. The system of claim 1 further comprising a data cache for storing data transferred from the data pump, thereby permitting data transfer at rates exceeding a data transfer rate of a data connection between the data pump and remaining portions of the cellular network.

8. In a digital wireless communications network, a method of providing increased data transfer rates at specific locations, the method comprising:

detecting a location of a WTRU and generating data concerning the location;

comparing the data concerning the detected location to a database, the database including location information for localized base stations providing high data transfer rates; and

effecting high transfer rate communication between the WTRU and one of the localized base stations when the comparing of the data indicates a coincidence between a location of the WTRU and the location of said one of the localized base stations.

9. The method of claim 8, wherein the localized base stations include data pumps capable of effecting said high data transfer rates with WTRUs within the data pump's coverage region.

10. The method of claim 8, further comprising providing dynamic tracking of the WTRU so as to predict which localized base station will be in communication with

the WTRU and to provide said information concerning the detected location to the database in anticipation of the WTRU reaching a coverage area of one of the localized base stations.

11. The method of claim 8, further comprising providing dynamic tracking of the WTRU so as to predict which localized base station will be able to communicate with the WTRU prior to data transfer negotiation, thereby facilitating said data transfer negotiation.

12. The method of claim 8, further comprising:
receiving a data request for transfer data between the WTRU and the network; and
responsive to the receipt of the data request effecting said high transfer communication.

13. The method of claim 12, comprising the network coordinating a connection of the WTRU with the localized base station.

14. The method of claim 12, comprising the network coordinating a handover of the WTRU between the localized base station and the remainder of the digital wireless communications network.

15. The method of claim 12, comprising providing a soft handover of the WTRU between the localized base station and the remainder of the digital wireless communications network coordinated between the WTRU and the data pump by the network.

16. The method of claim 12, comprising providing a hard handover of the WTRU between the localized base station and the remainder of the digital wireless communications network.

17. A wireless transmit/receive unit (WTRU) capable of increased data transfer rates at specific locations, the WTRU comprising:

- a data processing circuit for receiving information from a wireless network concerning the availability of a localized base station providing high data transfer rates;

- a memory associated with the data processing circuit for storing data transferred between the WTRU and the localized base station;

- the data processing circuit for accepting communications with the localized base station; and

- a data processing circuit for effecting communication between the WTRU and one of the localized base stations when the comparing of the data indicates a coincidence between a location of the WTRU and the location of said one of the localized base stations.

18. The apparatus of claim 17, wherein the data processing circuit receiving a data request for transfer data between the WTRU and the network, the data processing circuit responsive to the receipt of the data request effecting said high transfer communication.

19. The apparatus of claim 18, wherein the data processing circuit for facilitating a soft handover of the WTRU between the localized base station and the remainder of the digital wireless communications network.

20. The apparatus of claim 19, comprising the data processing circuit for facilitating hard handover of the WTRU between the localized base station and the remainder of the digital wireless communications network.

21. A digital wireless communications network, capable of providing increased data transfer rates at specific locations, the network comprising:

means for detecting a location of a WTRU and generating data concerning the location;

means for comparing the data concerning the detected location to a database, the database including location information for localized base stations providing high data transfer rates; and

means for effecting high transfer rate communication between the WTRU and one of the localized base stations when the comparing of the data indicates a coincidence between a location of the WTRU and the location of said one of the localized base stations.

22. The apparatus of claim 21, further comprising means for providing dynamic tracking of the WTRU so as to predict which localized base station will be in communication with the WTRU, said means further providing said information concerning the detected location to the database in anticipation of the WTRU reaching a coverage area of one of the localized base stations.

23. The apparatus of claim 21, further comprising:

means for receiving a data request for transfer data between the WTRU and the network; and

means, responsive to the receipt of the data request, for effecting said high transfer communication.

24. The apparatus of claim 23, comprising means for providing a soft handover of the WTRU between the localized base station and the remainder of the digital wireless communications network.

25. The apparatus of claim 23, comprising means for providing a hard handover of the WTRU between the localized base station and the remainder of the digital wireless communications network.